

## Dust Suppressants

One car traveling a mile on an unpaved road every day will create one ton of dust in a year. Multiplied by the number of vehicles and one can see the impact of dust.

Dust indicates a weakened road surface. Dust or “fines” act as a road glue and hold the road surface together. An unstable surface is a driving hazard and limits visibility.

Dust suppressants reduce airborne dust. Dust may create a health hazard for those with breathing problems. It is hazardous for sensitive crops, roadside vegetation, and animals. Dust control results in less dust in homes, businesses, and vehicles. One agency benefit is fewer citizen complaints.

A suppressant holds or binds the surface particles together and increases the road density. Dust affects the bottom line. When fines are lost, maintenance costs increase.

### Dust Control Products

Chlorides and asphalts are two dust control products.

Chlorides are most widely used and cost-effective. Liquid calcium chloride and liquid magnesium chloride are water based, odorless, colorless, non-toxic, nonflammable, and “environmentally friendly” when applied properly.

Calcium chloride and magnesium chloride are hygroscopic and deliquescent. When chlorides are applied, they draw and hold the air’s moisture. A chloride-treated road can be graded without losing its dust control capabilities.

Cut back liquid asphalts and emulsified asphalts are readily available but are not as widely used. These products form a “crust” on the road surface. They do not bind well to the dry surface below. Asphalt-treated roads are difficult to maintain as they cannot be bladed without removing the dust control properties.

Potholes can be an issue on asphalt-treated surface.

### Preparation and Application Tips

The road surface should contain a good gradation of aggregate materials with a maximum size of ¾ inch. When there is an insufficient gradation, add material to improve gradation.

Before blading, pre wet the gravel to the optimum moisture content (seven percent). Water breaks up the surface crust, potholes, and washboard. Create a modified “A” crown (four percent).

Apply chlorides with a calibrated, ground-speed control unit designed for roads.

Do not allow traffic on the surface until it has started to cure--usually a few hours. If impossible, reduce traffic speed.

Roll the surface with a rubber tired roller. Roll to compact the road. Watch the rolling operation to ensure that the materials do not stick to the tires. If this happens, stop rolling, and allow more time to cure.

Source:

*Dust Suppressants Help to Keep Dust on the Road and Out of the Atmosphere*, Tribal Transportation News, OSU, June 2004, P. 2-3

## What is a Road Managers Meeting?

Butch Leel facilitates these meetings for road managers and supervisors. There is always a short presentation. This year we’re featuring sessions on succession planning, time management, and road files

Meetings are scheduled for 2 ½ hours. They provide people with an opportunity to meet and network with others in the field.